From:	Aram Varjabedian
To:	Turin, David; david.burns (david.burns@state.ma.us); Joyce, Ryan (FWE)
Cc:	John Struzziery; Robert Scott; Bill Boornazian; bkiely
Subject:	Hull, MA WPCF - MA0101231 - Permit exceedence - Enterococci
Date:	Thursday, March 26, 2020 12:43:05 PM
Attachments:	image002.png

Good afternoon:

I wanted to inform you that we had a maximum daily exceedance for an effluent enterococci sample that was collected on Monday 3/23/2 at 10:00AM. We were informed of the results from our contract lab G&L Labs.

Max daily fecal coliform limit – 276 CFU/100ml

Result for 3/23/20 – 390 CFU/100ml

The sampling for fecal coliform and enterococci is done at the same time. A separate sample for fecal coliform and enterococci is collected in a sterile 120mL specimen container from the chlorine contact chamber channel. The sampling procedure and location are the same with no recent changes. The chlorine residual at the time of sample was higher than typically seen and had been at this level The chlorine residual at the time of sampling was 1.9 mg/L and was well above our typical target of 1.0-1.2 mg/L for the flow rates observed and the observed residual was at that level for the previous 4-5 hours.

I have reached out to the contract lab to obtain additional information, to see if all of their QA/QC requirements were met, and if there may have been a reason why the fecal coliform result of 10 CFU/100mL was extremely low, but the enterococci result was very high. Their return reply indicated that all QA/QC was met with the various dilutions, and with the same technician performing the analysis. The lab also indicated that the fecal coliform bacteria may die off more quickly than the enterococci, but the samples were analyzed well within the maximum allowable hold time. It is possible that something unforeseen was picked up during the sampling for enterococci, or something occurred in transport or at the lab. This is unknown. As a result of the Covid-19 crisis, the contract lab hours have been reduced significantly, and only has one day available per week to deliver samples and for the lab to run the samples.

The effluent pumps pump from the effluent wet well up to the CCT's and the pumping rate is based upon flows into the plant and the wet well level. It is possible that something microscopic may have become dislodged due to the variable flows prior to the sampling time, as the effluent pump had cycled on and off several times, due to lower flows. All of the earlier samples collected for the month of March for both fecal coliform and enterococci had results of <10 CFU/100ml, and these samples were collected at a similar time.

Our disinfection process is operating well, and flows during the sampling period were approximately 1.0 MG. Sodium hypochlorite is currently being added into the effluent wet well before the effluent is pumped up to the chlorine contact tanks [CCT]. Both CCT's are currently on line. I will provide an update, should any additional information become available from the contract lab.

Should you have any questions or need additional information, please let me know.

Sincerely,

Aram

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